

Lesson 5.2: Similar triangles:1. Solve for x and round to one decimal place where necessary.

a) $\frac{x}{25} = \frac{3}{4}$

~~25~~ $\cdot \frac{x}{25} = \frac{3}{4} \cdot 25$

$$x = \frac{75}{4}$$

$$x = 18.75$$

b) $\frac{x}{4} = \frac{1.3}{5.7}$

~~4~~ $\cdot \frac{x}{4} = \frac{1.3}{5.7} \cdot 4$

$$x = \frac{5.2}{5.7}$$

$$x = 0.91$$

c) $\frac{6.5}{10} = \frac{x}{2.6}$

$$\frac{6.5 \times 2.6}{10} = x$$

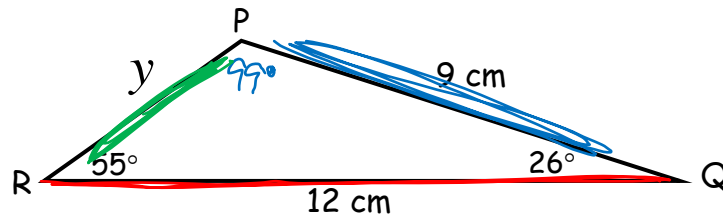
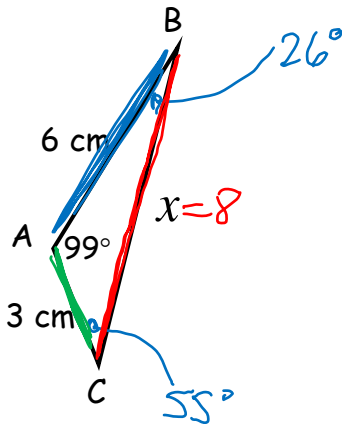
$$1.69 = x$$

$$x = 1.69$$

cross multiplying

2. Given: $\triangle ABC \sim \triangle PQR$.

similar

✓ a) Find the measures of $\angle B$, $\angle C$, and $\angle P$ b) Find the length of sides x and y .

$$\frac{x}{12} = \frac{6}{9} \quad \frac{CB}{RQ} = \frac{AB}{PQ}$$

$$\frac{y}{3} = \frac{9}{6}$$

$$y = \frac{9 \times 3}{6}$$

$$y = 4.5$$

$$x = \frac{6 \cdot 12}{9}$$

$$x = 8$$

$$\frac{4.5}{3} = \frac{8}{12} = \frac{9}{6} = 1.5$$

$$\text{Scale factor} = \frac{4.5}{3} = 1.5$$

